

# *Aspergillus fumigatus* NMT

1 ATGGCGGAGTCGCTATTGGAAAACAACCCCGCTCTCAGGACGAGACGGCCGCGCATGGACAAGCAAGCGGCGGCAATGCGCAAAATGAACATTG 100  
M A E S L L E N N P A L R N E T A G M D K D K A A E A M R K M N I A

101 CCGAATTGCTGACAGGCTTGTCAGTTTCCGGGGAAGAACCAAGAGGATATGGCTTCGTACAAGTTTGGCAACGCGCCTGTGCCCGGATTCTGATGAGAC 200  
E L L T G L S V S G K N Q K D M A S Y K F W Q T Q P V P R F D E T

201 GAGTACCGATACTGGGGCCCTATCAAGATCATTGATCCCTGAAAGGCTCTCAAAGGAACCGGATGCGCTGCTTGAAGGATTTGAATGGCGACACTCGAC 300  
S T D T G G P I K I I D P E K V S K E P D A L L E G F E W A T L D

301 CTGACAAACGAGACTGAGCTGCAGGAGCTGTGGGATTGTGTGACGTATCTACGTAGAGGACGACAATGCCATGTTCCGGTTCAGATATTCGCAGTCGT 400  
L T N E T E L Q E L W D L L T Y H Y V E D D N A M F R F R Y S Q S F

401 TCCTACACTGGGCTCTTATGTCGCTGGCTGGAAAAGGAATGGCATGTCCGGTGTCGCGGTACGAAGTCGCGCAAACTGGTAGCGTCCATTGCGGTGT 500  
L H W A L M S P G W K K E W H V G V R A T K S R K L V A S I C G V

501 CCCGACAGAGATCAATGTGGCAATCAAAAGCTCAAGGTCGTCGAGATCAATTTCTCTGCATCCACAAGAGCTCCGCTCGAAGCGCTTGACCCCCAGTT 600  
P T E I N V R N Q K L K V V E I N F L C I H K K L R S K R L T P V

601 CTCATCAAGAAATCACCCGTCGTTGTACCTCAATGGCATCTACCAAGCCATCTACACTGGGGGTGTGGTGTCTCCCACTCCTGTGAGCTCATGCCGCT 700  
L I K E I T R R C Y L N G I Y Q A I Y T A G V V L P T P V S S C R Y

FIG. 1A

701	ACTACCAACCGTCTCTTTGGACTGGTTGAAGCTTTACGAGGTGCGCTTCTCGCCTCTCCCTGCCGGATCCACCAAGCGCGCAGATCACCAGAATCACCT Y H R P L D W L K L Y E V G F S P L P A G S T K A R Q I T K N H L	800
801	GCCCCAGTACTACCTCTACCCCCGGTCTTCGCCCCCATGGAGCCCAAGACATTGACACAGTGCATGATCTTTTGCAGCGATACCTTGTGCGGTTTGC GTTG P S T T S T P G L R P M E P K D I D T V H D L L Q R Y L S R F A L	900
901	AACCGAGCGCTTTACGCGAGAGGAAGTGGACCATTTGGTCTGTGCACAAGCCGGAGACGGTGAAGAGCAGGTGCTGTGGGCATACGTGGTAGAGGACCCTG N Q A F T R E E V D H W L V H K P E T V K E Q V V W A Y V V E D P E	1000
1001	AAACGACAAGATCACCGACTTCTTTTCTCTTCTACAACCTCGAATCCACCGTCATTGAGATCCCAAGCATGACAAATGTGCGTGCTGCTTACCTGTACTA T H K I T D F F S F Y N L E S T V I Q N P K H D N V R A A Y L Y Y	1100
1101	CTATGCAACCGAAACAGCTTTCCACCAATAACATGAAGGCTCTCAAGAGCGTCTGTGATGCTGATGAATGACGCTCTGATCTGGCTAAGAAGGCGCAC Y A T E T A F T N N M K A L K E R L L M L M N D A L I L A K K A H	1200
1201	TTTGATGTGTTCAACGCACCTTACGCTTCACGATAACCCCTCTGTTCTCGAACAACTCAAAATTTGGAGCTGGCGATGGGCAGCTTCACTTCTACCTCTACA F D V F N A L T L H D N P L F L E Q L K F G A G D G Q L H F Y L Y N	1300
1301	ACTATCGACCGCCCTGTTCTCTGGAGAGGTTAACGAGAAGAACCCTGCCGATGAGAAAGAATGGGAGCGCTTGGCATCGTTATGCTGTAA Y R T A P V P G G V N E K N L P D E K R M G G V G I V M L *	1392

**FIG. 1B**

(SEQ ID NO:2)

nm1 (Aspergillus fumigatus)

1 TCCGACTTAAGGATCGCAAGGCAAGGCCCGGAGGGCCAGTCTTCCGAAAGAAGAAGATGGCGCGGTGAACATACCCCTCAGATGGCGGAGTCGGCTAT 100  
 AGGCTGAGATCCTAGCGTTCCCGTTCCGGGGCTCCCGGTTCAGAAAGCTTTTCTTTCTACCGCGCCACTTGTATTGGGAGTCTACCCGCTCAGCGATA  
 1 M A E S L L 6

101 TGGAAACAACCCCGCTCTCAGGAACGAGACGGCCGCGCATGGACAAAGACAGCGCGGAGGCAATGCCGAAATGAACATTGCCGAATTGCTGACAGG 200  
 ACCTTTGTGGGCGAGAGTCCTTGTCTGCGCGCGTACCTTGTCTGTTCCGCGCCCTCCGTTACGCGTTTACTTGTAAACGGCTTAACGACTGTCC  
 7 E N N P A L R N E T A G M D K D K A A E A M R K M N I A E L L T G 39

201 CTTGTAGTTTCCGGGAAGAACAGGATATGGCTTCGTACAAAGTTTGGCAACCGAGCCTGTGCCCCGATTCGATGAGACGAGTACCGATACCTGGG 300  
 GAACAGTCAAAAGGCCCTTCTTGGTCTTCCCTATACCGAAGCATGTTCAAACCGTTTGGTTCGGACACGGGGCTAAGCTACTCTGCTCATGGCTATGACCC  
 40 L S V S G K N Q K D M A S Y K F W Q T Q P V P R F D E T S T D T G 72

301 GGCCCTATCAAGATCAATGATCTGAAAGGTCTCAAAAGGTCTCAAGGATGCGTCTTGAAGGATTTGAATGGCGGACACTCGACCTGACAAACGAGACTG 400  
 CCGGGATAGTTCTAGTAACTAGGACTTTTCCAGAGTTTCTTGGCCTACCGGACGAACTTCTTAACTTACCGCTGTGAGCTGGACTGTTTGTCTGTGAC  
 73 G P I K I I D P E K V S K E P D A L L E G F E W A T L D L T N E T E 106

401 AGCTGCAGGAGCTGTGGGATTTGTGACGTATCACTACGTAGAGGACGACAAATGCCATGTTCCGGTTCAAGATATTCGAGTCTGTTCTTACACTGGTGGT 500  
 TCGACGTCCTCGACACCCCTAAACAACCTGCATAGTATGATCATCTCCTGCTGTACGGTACAAAGCCCAAGTCTATAAGCGTCAGCAAGGATGTGACCCACCCA  
 107 L Q E L W D L L T Y H Y V E D D N A M F R F R Y S Q S F L H W 137

501 GCACAAACGCGCGGAGGATCTGTTTCTCACCGGCTTGGAGGGGTGATTAATTGAGCGCTGACAAATTTGACCGTAGGGCTCTTATGTCGCTGGCT 600  
 CGTGTTCGCGCGGCTCCCTAGACAAAGAGTGGCGCAACCCCTCCACACCTAATAAAGTCCGACTGTTAAACTGGCATCCCGAGAAATACAGGGACCGA  
 138 A L M S P G W 144

FIG. 2A

601 GGAAAAGGAATGGCATGTTCGGGTGTCGGCGCTACGAAGTCGGCAAACTGGTAGGTCCTATTTCGGGTGTCGGACAGATCAATGTGCGCAATCAAAA 700  
CCTTTTTCCTTACCGTACAGCCACAGCGCGGATGCTTCAGCGGTTTGACCATCGCAGGTAAACGCCACAGGGCTGTCTCTAGTTACACGGCTTAGTTT

145 K K E W H V G V R A T K S R K L V A S I C G V P T E I N V R N Q K 177

701 GCTCAAGGTCGTCGAGATCAATTTCTCTGTCACCAAGAAGCTCCGCTCGAAGCGCTTGACCCCGCTTCATCAAGAAGAAATCAACCCGTCGTTGCTTAC 800  
CGAGTTCAGAGCTCTAGTTAAAGGAGACGTAGGTGTTCTTCGAGCGGAGCTTCGCGGAGCTTCGCGGAGTAGTTTCTTTAGTGGGAGCAACCGATG

178 L K V V E I N F L C I H K K L R S K R L T P V L I K E I T R R C Y 210

801 CTCATGGCATCTACCAAGCCATCTACACTGCGGGTGTGGTCTCCCACTCCTGTGTCAGTCAATGCCGCTACTACCAACGTCCTTTGGACTGGTTGAAGC 900  
GAGTTACCGTAGATGTTTCGGTAGATGTGACGCCACACACGAGGGGTGAGGACAGTCGAGTACGGCGATGATGGTGGCAGAAACCTGACCAACTTCG

211 L N G I Y Q A I Y T A G V V L P T P V S S C R Y Y H R P L D W L K L 244

901 TTTACGAGTCGGCTTCCTCGGCTCCTCGGATCCACCAAGCGCGCCAGATCACCAGAATCACTGCCCCAGTACTACCTCTACCCCGGCTTCG 1000  
AAATGCTCCAGCCGAAAGCGGAGGGACCGGCTTAGTGTGTTCCCGCGGTCTAGTGTGTTCTTAGTGACGGGTCAATGATGAGATGGGGGCCAGAAC

245 Y E V G F S P L P A G S T K A R Q I T K N H L P S T T S T P G L R 277

1001 CCCCATGGAGCCCAAGACATTGACACAGTCGATGATCTTTTGAGCGGATACTTGTGCGGGTTTGGCTTGAACCAAGGCTTTACCGCAGAGGAAGTGGAC 1100  
GGGGTACCTCGGGTTCTGTAACTGTGTCAGTACTAGAAACCGTGGCTATGAACAGCGCCAAACGCAACTTGGTCCGGAAATGCGCTCTCCTTCACCTG

278 P M E P K D I D T V H D L L Q R Y L S R F A L N Q A F T R E E V D 310

1101 CATTTGGCTGTGCACAAGCCGAGACGGTGAAGAGCAGGTGCTTGGGCATACGTGTGAGGAGCCCTGAACCGCACAGATCACCGACTTCTTTTCCT 1200  
GTAAACCGAGCACGTGTTCGGCTCTGCCACTTTCTCTGTCAGACGCCGTATGCACCATCTCTCGGACTTTGCGGTGTTCTAGTGGCTGAAGAAAAGGA

311 H W L V H K P E T V K E Q V V W A Y V V E D P E T H K I T D F F S F 344

1201 TCTACAACCTCGAATCCACCGTCATTTCAAGATCCCAAGCATGAACAATGTCGTCGTCCTTACCTGTACTACTATGCAACCGAAACAGCTTTTCAACCAATAA 1300  
AGATGTTGGAGCTTAGGTGGCAGTAAGTCTTAGGGTTCGTACTGTTACACGCACGACGAATGGACATGATGATACGTTGGCTTTGTGAAAGTGGTTATT

345 Y N L E S T V I Q N P K H D N V R A A Y L Y Y A T E T A F T N N 377

FIG. 2B

1301 CATGAAGCCTCTCAAAGAGCGCTCTGCTGATGCTGATGAATGACGCTCTGATCTCTGGCTAAGAAGGTAACCTACAGGGATCCACTGCCAATTTCCCTGGAGTTT 1400  
GTACTTCCGAGAGTTTCTCCGAGACGACTACGACTACTTACTCCGAGACTAGGACCGGATCTTCCATTGATGCCCTAGGTACCGTAAGGGACCTCAA  
378 M K A L K E R L L M L M N D A L I L A K K A 399  
1401 GACTTACGAAGCTTGACATTTGTGTTGATAGGCGCACTTTGATGTGTTCAACGCACCTTACGCTTCACGATAACCCCTCTGTTCTCGAACAACCTCAAAATTTGG 1500  
CTGAATGCTTCGACTGTAAACACAACATATCCGCGTGAACACTACAAGTTGCGTGAATGCGAAGTGCTATTGGGAGACAAGGAGCTTGTGAGTTTAAACC  
400 H F D V F N A L T L H D N P L F L E Q L K F G 422  
1501 AGCTGGCGATGGCGAGCTTCACTTCTACCTCTACAACTATCCGACCGCCCTGTTCTCTGGAGGAGTTAACGAGAAGAACCTGCCGATGAGAAAAAGAAATG 1600  
TCGACCGCTACCGTTCGAAGTGAAGATGGAGATGTGATAGGTGGCGGGACAAGGACCTCCCTCAATTGCTCTTCTTGGACCGCCTACTCTTTTCTTAC  
423 A G D G Q L H F Y L Y N Y R T A P V P G G V N E K N L P D E K R M 455  
1601 GGAGCGTTGGCATCGTTATGCTGTAAACATTTCTCACCGCATGGACCATGCCCTCTCGCCTCGTTGATGATCGCATCTTATACCTATTTTCTCGCTGTGAC 1700  
CCTCCGCAACCGTAGCAATACGACATTTTGTAGAGTGGCGTACCTGTGACGGAGCGGAGCAACTACTAGCGTAGAATATGGATAAAGAGCGACACTG  
456 G G V G I V M L \* 463

1701 ATGAATTTGGGTATGCGAAATACCATGAAAAATTTG 1735 (SEQ ID NO:3)  
TACTTAAACCCATACGCTTTATGGTACTTTTAAAC (SEQ ID NO:2)

FIG. 2C